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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/065,798 | 11/20/2002 | Jingxi Zhang | | 6562 |

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FOSTER CITY, CA 94404

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| EXAMINER |
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NGUYEN, JENNIFER T

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| ART UNIT | PAPER NUMBER |
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2674

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DATE MAILED: 09/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/065,798

Applicant(s)

ZHANG ET AL.

Examiner

Jennifer T Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11/20/2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-12 and 14-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Hashimoto et al. (Patent No.: US 5,554,980).

Regarding claim 1, referring to Figs. 1-4, Hashimoto teaches a pointing control system, comprising: a battery-powered handheld pointing device (1) (Fig. 1) to enable the user to move the position of a pointer or a cursor (108) (Fig. 4) presented on a display device (100) by changing said handheld pointing device's heading direction without using any reference objects, and a pointer display control unit (i.e., remotely controlled unit 21) that communicates with the handheld device (1) (col. 14, line 44 to col. 15, line 11), and interfaces a computer to control the pointer (108) on the screen location and generate a control signal to notify the computer that a selectable identifier on display has been selected (col. 15, lines 45-67); and/or interfaces to a television to generate a replaceable image as a cursor and a set of selectable identifier images, which are superimposed onto the video signal and displayed on the screen (from col. 17, line 40 to col. 18, line 50).

Regarding claim 2, Hashimoto further teaches the handheld pointing device comprises a sensor unit and wherein the sensor unit comprises a set of orthogonally arranged spatial orientation sensors (2, 3) (Fig. 2) in which magnetic field sensors or gyro sensors are utilized for

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detecting said device's yaw (azimuth) angle (col. 15, lines 25-50) and a set of accelerometer sensors (19, 19a) (Fig. 62) or gyro sensors are utilized for detecting said device's pitch (inclination) angle (col. 33, lines 2-40), so that said device's device orientation in three-dimensional space can be determined without using any other reference sources in the local environment.

Regarding claim 3, Hashimoto further teaches the handheld pointing device comprises a selection unit (9) (Fig. 1) comprises a set of buttons which allow the user to select a command identifier on the display, to calibrate the pointer location, and to control pointer appearance status, and of a circuitry (125) (Fig. 1) to collect said buttons' activities (col. 15, lines 51-56, col. 16, lines 41-49).

Regarding claim 4, Hashimoto further teaches a circuitry (124) (Figs. 1, 2) to collect, condition, process, and code the data from the sensor unit and the data from the selection unit (col. 14, lines 5-45 and col. 15, lines 25-44).

Regarding claim 5, Hashimoto further teaches a battery management unit (18) which controls and conditions the power supply, and a method to monitor the sensors' activities and notify the battery management unit (18) to shut down components' power supplies in order to reduce power consumption during the handheld pointing device's idle stage (col. 24, line 54 to col. 25, line 29).

Regarding claim 6, Hashimoto further teaches a wireless transmission unit (12) (Fig. 2) to transmit orientation data and user selection activity data to the pointer display control unit remotely (col. 14, lines 4-45).

Regarding claim 7, Hashimoto further teaches a wireless receiver (26) (Fig. 3) to intercept the orientation data and user selection activity data transmitted from the handheld pointing device (1) (from col. 14, line 44 to col. 15, line 11).

Regarding claim 8, Hashimoto further teaches the pointer display control unit (21) comprises a microprocessor (24), a memory module (135), a control circuitry (134), and supporting software to analyze and translate the handheld pointing device's orientation data to coordinates for the pointer (1) on the target screen, and to calibrate the pointing direction of the handheld pointing device (from col. 14, line 44 to col. 15, line 11).

Regarding claim 9, Hashimoto further teaches the pointer display control unit (21) comprises a circuitry (24) to interface a computer system, to control the cursor's location on the screen in response to received data describing the handheld pointing device's spatial orientation, and to activate a computer function in response to user selection activities (col. 16, lines 45-59).

Regarding claim 10, Hashimoto further teaches the pointer display control unit (21) comprises a circuitry (24) to interface a television set, comprises a method to draw selectable identifiers (222) on the television screen and a method detect if a selectable identifier on screen has been selected in response to the user's clicking activity on the handheld device buttons (Figs. 6-15, from col. 15, line 51 to col. 18, line 45).

Regarding claim 11, referring to Figs. 1, 3, and 4, Hashimoto teaches a recorder unit (126) to record and store remote control command codes for target devices (i.e., a laser disc player 32), a base member (12), which is associated with a pointing system, to transmit the identity of a user-selected on-screen identifier or command code to the remote member, and a remote member (122), which faces the target devices, to receive the data from the base member

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(12) and forward the infrared control command to target devices (31, 32) (from col. 14, line 31 to col. 15, line 56 and from col. 17, line 40 to col. 18, line 50).

Regarding claim 12, Hashimoto further teaches an infrared receiver (122) to intercept the remote control command codes from the target device's infrared remote control, a memory (126) module to store the intercepted remote control command codes and user-selected identities, a circuitry (125) to couple with the base member or remote member of said command delivery apparatus, and a method to store or retrieve the command code paired with a user-selected screen identity (from col. 14, line 31 to col. 15, line 56).

Regarding claim 14, Hashimoto further teaches a circuitry to interface a pointing control system and a wireless transmitter (12) to transmit a user-selected screen identity or a control command code stored in the recorder unit to the remote member when the user applies a selection activity (from col. 14, line 31 to col. 15, line 56 and from col. 17, line 40 to col. 18, line 50).

Regarding claim 15, Hashimoto further teaches a wireless receiver (122) to intercept data from the base member, and an infrared transmitter (122) to forward a selected command control code to the target device (col. 15, lines 1-24).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hashimoto et al. (Patent No.: US 5,554,980) in view of Mishra et al. (Pub. No.: US 2001/0015717).

Regarding claim 13, Hashimoto differs from claim 13 in that he does not specifically teach a software to prompt the user to activate a conventional remote control, to control the infrared receiver, to verify and process the received infrared data, and to store and archive the command codes. However, Mishra teaches software to prompt the user to activate a conventional remote control, to control the infrared receiver, to verify and process the received infrared data, and to store and archive the command codes [0035]-[0040]. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the software program as taught by Mishra in the system of Hashimoto in order to provide a pointing device with simplifier circuitry and reduced cost.

5. The prior art made of record and not relied upon is considered to pertinent applicant's disclosure.

Feinleib et al. (U.S. Patent No. 6,346,891) teaches remote control system with handling sensor in remote control device.

Kobayashi (Pub. No.: US 2001/0050672) teaches coordinate input apparatus.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Jennifer T. Nguyen** whose telephone number is **703-305-3225**.

The examiner can normally be reached on Mon-Fri from 9:00-5:30.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

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Washington, DC. 20231

Or faxed to: 703-872-9306 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,
Arlington, VA, sixth-floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding
should be directed to the Technology Center 2600 Customer Service Office whose telephone
number is 703-306-0377.

JNguyen
9/22/2004


REGINA LIANG
PRIMARY EXAMINER